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EXAMINER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/804,492	TAKASUKA ET AL.	
	Examiner	Art Unit	
	Michael V. Battaglia	2652	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 July 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15 and 18-22* is/are rejected.

7)☒ Claim(s) *16 and 17* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-11 and 19 are rejected under 35 U.S.C. 102(e) as being anticipated by Ohyama (US 6,512,608). Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

In regard to claim 1, Ohyama discloses an optical head device that is configured to carry out reproduction or recording with respect to a plurality of optical information recording media of various types of pit rows or guide grooves, comprising: a plurality of semiconductor lasers (Figs. 14-15, elements 25 and 27) that are disposed on one substrate (Fig. 14, element 39) and that are provided so as to correspond respectively to the plurality of optical information recording media of various types of pit rows or guide grooves (Col. 8, lines 23-28); and optical elements disposed on an optical path between the plurality of semiconductor lasers and an optical information recording medium (Fig. 14, element 33 and the lens in between elements 33 and 21), wherein the plurality of semiconductor lasers are disposed so that beam spots (beam spots formed by Fig. 14, elements B0, B1 and B2), formed on the optical information recording medium, of light beams emitted from the plurality of semiconductor lasers are aligned in a substantially same direction as a pit-row direction or a guide groove direction (Fig. 14, element Y), wherein the pit-row direction and the

guide groove direction are both aligned along a tangential direction (Fig. 14, element Y) in the optical information recording medium (Fig. 14 and Col. 19, line 66-Col. 20, line 1). See Response to Arguments below for further explanation.

In regard to claim 2, Ohyama discloses that the optical head device further comprises a photodetector where returning light from the optical information recording medium enters (Figs. 15 and 17, elements 35, 37, 43, 45, 47, 49, 55-58, 65, 67, 69 and 71).

In regard to claim 3, Ohyama discloses that the plurality of semiconductor lasers have different emission wavelengths from one another (Col. 19, lines 54-56).

In regard to claim 4, Ohyama discloses that the two semiconductor lasers are provided and have different emission wavelengths, each of which is selected from a group consisting of ranges of: 630 nm to 690 nm, 780 nm to 820 nm, and 200 nm to 450 nm (Col. 8, lines 23-28 and Col. 19, lines 54-56).

In regard to claim 5, Ohyama discloses that the beam emission points of the plurality of semiconductor lasers are aligned on a substantially straight line and are spaced at 150 um or less (Col. 19, lines 56-60).

In regard to claim 6, Ohyama discloses that one of the optical elements is a diffraction grating (Figs. 14-16, element 33).

In regard to claim 7, Ohyama discloses that the diffraction grating is divided into 2n (where n indicates a natural number) diffraction regions with different grating periods from one another (Figs. 14-16, elements 29, 31 and 33).

In regard to claim 8, Ohyama discloses that the dividing lines that divide the diffraction regions are positioned substantially parallel to or substantially perpendicular to the pit-row

direction or the guide groove direction in the optical information recording medium (Figs. 14-16, elements 29, 31 and 33).

In regard to claim 9, Ohyama discloses that one of the dividing lines that divide the diffraction regions divides returning light from the optical information recording medium into two substantially equal parts (Fig. 16, X-axis).

In regard to claim 10, Ohyama discloses that the diffraction grating is divided into 2n (where n indicates a natural number) diffraction regions with different grating pitch directions from one another (Figs. 14-16, elements 29, 31 and 33).

In regard to claim 11, Ohyama discloses that the dividing lines that divide the diffraction regions are positioned substantially parallel to or substantially perpendicular to the pit-row direction or the guide groove direction in the optical information recording medium (Figs. 14-16, elements 29, 31 and 33).

In regard to claim 19, Ohyama discloses that the optical head device further comprises a plurality of photodetectors where returning light from the optical information recording medium enters, wherein the plurality of semiconductor lasers and at least part of the plurality of photodetectors are integrated on one substrate (Figs. 14-15, element 39).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-4, 6-11, 15, 19 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shindo (US 5,963,515) in view of Funato (US 6,072,579).

In regard to claim 1, Shindo discloses an optical head device that is configured to carry out reproduction or recording with respect to a plurality of optical information recording media of various types of pit rows or guide grooves, comprising: a plurality of semiconductor lasers that are provided so as to correspond respectively to the plurality of optical information recording media of various types of pit rows or guide grooves (Fig. 7, elements 32-33; Col. 11, line 16; and Col. 13, line 67-Col. 14, line 2); and optical elements (Fig. 7, elements 13, 15-16, 18, 38 and 42) disposed on an optical path between the plurality of semiconductor lasers and an optical information recording medium (Fig. 7, element 17), wherein the plurality of semiconductor lasers are disposed so that beam spots (Fig. 7A, spots formed by elements MB and SB1-SB4), formed on the optical information recording medium, of light beams emitted from the plurality of semiconductor lasers are aligned in a substantially same direction as a pit-row direction or a guide groove direction, wherein the pit-row direction and the guide groove direction are both aligned along a tangential direction in the optical information recording medium (Fig. 4 and Col. 14, lines 38-42 and 50-54). Shindo does not disclose that the plurality of semiconductor lasers is disposed on one substrate.

Funato discloses an optical head device (Fig. 6) that is configured to carry out reproduction or recording with respect to a plurality of optical information recording media (Fig. 6, elements 7 and 8) of various types of pit rows or guide grooves. Funato teaches disposing a plurality of semiconductor lasers (Fig. 7A, elements 1' and 2') on one substrate (Fig. 7A, element 13) to make the optical head device compact (Col. 14, lines 36-42).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to dispose the plurality of semiconductor lasers of Shindo on one substrate as

suggested by Funato, the motivation being to make the optical head device compact. See Response to Arguments below for further explanation.

In regard to claim 2, Shindo discloses that the optical head device further comprises a photodetector where returning light from the optical information recording medium enters (Fig. 7, element 20).

In regard to claim 3, Shindo discloses that the plurality of semiconductor lasers have different emission wavelengths from one another (Col. 13, lines 41-42).

In regard to claim 4, Shindo discloses that two semiconductor lasers are provided and have different emission wavelengths (Col. 13, lines 41-42). Shindo does not disclose that each of the wavelengths is selected from a group consisting of ranges of: 630 nm to 690 nm, 780 nm to 820 nm, and 200 nm to 450 nm. Instead Shindo discloses that the different wavelengths are used to access either one of two types of optical disc having different track pitches (Col. 14, lines 20-54).

Funato discloses two types of optical disc ("CD" and "DVD" of Col. 1, lines 13-30) known in the art to have different track pitches (see Citation of Relevant Prior Art below). Funato discloses that a DVD is accessed using a wavelength of 650nm and a CD is accessed using a wavelength of 785nm (Col. 1, lines 25-30).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made for each of the wavelengths of Shindo to be selected from a group consisting of ranges of: 630 nm to 690 nm, 780 nm to 820 nm, and 200 nm to 450 nm as suggested by Funato, the motivation being to select wavelengths for the two semiconductor lasers of Shindo that allow the optical head device of Shindo to access either one of a CD and a DVD.

In regard to claim 6, Shindo discloses that one of the optical elements is a diffraction grating (Fig. 7, element 13).

In regard to claim 7, Shindo discloses that that the diffraction grating (Figs. 3 and 7, element 13 and Col. 13, lines 30-33) is divided into 2n (where n indicates a natural number) diffraction regions (Fig. 3, elements 13C and 13D). Shindo does not disclose the grating period of each of the diffraction regions (Col. 6, lines 13-26). However, the grating periods of each of the diffraction regions appear to be different in Fig. 3 and even if the grating periods were the same along axes perpendicular to gratings in the respective regions, then the occurrence of gratings (grating period) along an axis perpendicular to the gratings in diffraction region 13C of Fig. 3 would be different in each region (Pythagorean theorem) and the claim would be met.

In regard to claim 8, the dividing line (line between Fig. 3, elements 13C and 13D) that divides the diffraction regions is positioned substantially perpendicular to the pit-row direction or the guide groove direction in the optical information recording medium because the light beams produced by the gratings of diffraction region 13C of Fig. 3, which are parallel to the dividing line, produce beam spots that are substantially parallel to the pit-row direction or the guide groove direction (Col. 6, lines 16-20; Fig. 7A, elements SB1 and SB4; and Fig. 4, elements SS1 and SS4).

In regard to claim 9, Shindo discloses that one of the dividing lines (line between Fig. 3, elements 13C and 13D) that divide the diffraction regions divides returning light from the optical information recording medium into two substantially equal parts (Fig. 3).

In regard to claim 10, Shindo discloses that the diffraction grating (Fig. 3, element 13) is divided into 2n (where n indicates a natural number) diffraction regions with different grating pitch directions from one another (Fig. 3, elements 13C and 13D).

In regard to claim 11, it is noted that side beams diffracted by a diffraction grating are displaced from the 0-order beam in a direction perpendicular to the direction of the diffraction grating. Therefore, it is inherent that the dividing line that divides the diffraction regions of Shindo

are positioned substantially perpendicular to the pit-row direction or the guide groove direction in the optical information recording medium because the grating of the first diffraction region (Fig. 3, element 13C) is parallel to the dividing line (Fig. 3) and produces beam spots MS, SS1 and SS4 (Fig. 4 and Col. 6, lines 16-19) that are substantially parallel to the guide groove (Fig. 4, element 17a).

In regard to claim 15, Shindo discloses that the optical head device further comprises a plurality of photodetectors (Fig. 5, elements 20a-20e) where returning light from the optical information recording medium enters, wherein the optical elements and the plurality of photodetectors are disposed so that part of returning light from the optical information recording medium, which originates in each of the light beams emitted from the plurality of semiconductor lasers, enters one of the plurality of photodetectors at a time. It is noted that parts of returning light will enter all of the plurality of photodetectors, but the part of returning light that enters a particular one of the plurality of photodetectors will only enter that particular photodetector.

In regard to claim 19, Shindo discloses that the optical head device (Fig. 7) further comprises a plurality of photodetectors (Fig. 7, element 20 and Fig. 5, elements 20a-20e) where returning light from the optical information recording medium enters. Shindo does not disclose that the plurality of semiconductor lasers and at least part of the plurality of photodetectors are integrated on one substrate.

Funato discloses integrating a plurality of semiconductor lasers (Fig. 7A, elements 1' and 2') and at least part of a plurality of photodetectors (Fig. 7A, element 10B; Fig. 2B, element 10'; and Col. 14, 42-44) on one substrate (Fig. 7A, element 13) to make an optical head device (Fig. 6) compact (Col. 14, lines 38-42).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to integrate the plurality of semiconductor lasers of Shindo and at least part of the plurality of photodetectors of Shindo on one substrate as suggested by Funato, the motivation being to make the optical head device compact.

In regard to claim 22, Shindo discloses an optical recording and reproducing apparatus comprising an optical head device (Fig. 7, element 41), the optical head device being configured to carry out reproduction or recording with respect to a plurality of optical information recording media of various types of pit rows or guide grooves (Col. 14, lines 24-27) comprising; a plurality of semiconductor lasers (Fig. 7, elements 32-33) with different emission wavelengths from one another that are provided so as to correspond respectively to the plurality of optical information recording media of various types of pit rows or guide grooves (Col. 13, lines 39-42 and Col. 13, line 67-Col. 14, line 2); and optical elements (Fig. 7, elements 13, 15-16, 18, 38 and 42) disposed on an optical path between the plurality of semiconductor lasers and an optical information recording medium (Fig. 7, element 17), wherein the plurality of semiconductor lasers are disposed so that beam spots (Fig. 7A, spots formed by elements MB and SB1-SB4), formed on the optical information recording medium, of light beams emitted from the plurality of semiconductor lasers are aligned in a substantially same direction as a pit-row direction or a guide groove direction, wherein the pit-row direction or the guide groove direction is aligned along a tangential direction in the optical information recording medium (Fig. 4 and Col. 14, lines 38-42 and 50-54). Shindo does not disclose that the plurality of semiconductor lasers is disposed on one substrate.

Funato discloses an optical head device (Fig. 6) configured to carry out reproduction or recording with respect to a plurality of optical information recording media (Fig. 6, elements 7 and 8) of various types of pit rows and guide grooves. Funato teaches disposing a plurality of

semiconductor lasers (Fig. 7A, elements 1' and 2') on one substrate (Fig. 7A, element 13) to make the optical head device compact (Col. 14, lines 36-42).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to dispose the plurality of semiconductor lasers of Shindo on one substrate as suggested by Funato, the motivation being to make the optical head device compact. See Response to Arguments below for further explanation.

3. Claims 5 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shindo in view of Funato as applied to claim 1 above, and further in view of Uchizaki et al (hereafter Uchizaki) (US 6,646,975).

In regard to claim 5, Shindo in view of Funato disclose the optical head device of claim 1. It is inherent that beam emission points from the plurality of semiconductor lasers of Shindo that are disposed on the one substrate as suggested by Funato are aligned on a substantially straight line because any two points are aligned on a straight line no matter what their positions are. Shindo and Funato do not disclose spacing the emission points of the plurality of semiconductor lasers at 150 μm or less.

Uchizaki discloses spacing the emission points of a plurality of semiconductor lasers (Fig. 7A, element 31') at 150 Tm or less (Col. 12, lines 1-2) and teaches that by doing so the beams emitted therefrom are easily converged (Col. 12, lines 2-5).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to space the emission points of the plurality of semiconductor lasers of Shindo at 150 Tm or less as suggested by Uchizaki, the motivation being for easy convergence of the beams emitted from the emission points.

In regard to claim 14, Shindo in view of Funato disclose the optical head device of claim 1. Funato discloses that the substrate on which the plurality of semiconductor lasers are disposed is a heat sink (Figs. 7A, element 13 and Col. 14, line 54). Funato does not discuss what material the heat sink and therefore does not disclose that the heat sink is made of a metal or semiconductor material.

Uchizaki discloses a plurality of semiconductor lasers (Fig. 5, element 31) that are disposed on a heat sink (Fig. 5, element 41) made of a metal or a semiconductor material (Col. 14, lines 18-19).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made for the heat sink of Funato in the optical head device of Shindo in view of Funato to be made of a metal or a semiconductor material as suggested by Uchizaki, the motivation being to make the heat sink of a material known in the art for heat sinks.

4. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shindo in view of Funato as applied to claim 1 above, and further in view of Funato.

Shindo in view of Funato disclose the optical head device of claim 1. Funato discloses a integrating a photodetector (Figs. 6 and 7A, element 10B) and a plurality of lasers (Figs. 6 and 7A, elements 1' and 2') on one substrate (Fig. 7A, element 13) and directing returning light to the photodetector using a diffraction grating (Figs. 6 and 7A, element 9B) to make an optical head device compact (Col. 14, lines 38-42). It is noted that the diffraction grating is an optical element disposed on the path between the plurality of lasers and an optical information recording medium (Fig. 6, element 7 or 8). It is further noted that the photodetector is common photodetector used for receiving light beams of different wavelengths (Fig. 6 and Col. 14, lines 27-42).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to integrate the photodetector of Shindo and the plurality of semiconductor lasers of Shindo on one substrate and to direct returning light to the photodetector of Shindo using the diffraction grating of Funato as suggested by Funato, the motivation being to make the optical head device compact. It is noted that the diffraction grating of Funato is the diffraction grating read upon by the "diffraction grating" of claim 6 for the rejections of claims 12 and 13.

5. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shindo in view of Funato and further in view of Funato as applied to claim 6 above, and further in view of Takeda et al (hereafter Takeda) (US 6,489,599).

Shindo in view of Funato and further in view of Funato disclose the optical head device of claim 6. Funato does not disclose that the diffraction grating is sawtooth-shaped.

Takeda discloses that a sawtooth-shaped diffraction grating (Fig. 2B, element 10a) is preferable for directing light to a common photodetector (Fig. 2B, element 11) used for receiving light of different wavelengths (Fig. 2B, elements L1r and L2r) because the yield of light to the common photodector is enhanced (Col. 6, lines 11-19).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made for the diffraction grating of Funato in the optical head device of Shino in view of Funato to be sawtooth-shaped as suggested by Takeda, the motivation being to enhance the yield of light directed to the common photodetector of Funato.

6. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shindo in view of Funato and further in view of Funato as applied to claim 6 above, and further in view of Tanabe et al (hereafter Tanabe) (US 6,118,586).

Funato does not disclose that the diffraction grating has grooves whose depths vary in a step-wise manner in a constant period. It is noted that the photodetector of Shindo in view of Funato is a single element used for receiving light diffracted in one of the + or - directions by the diffraction grating of Funato.

Tanabe discloses that a diffraction grating (Fig. 3) having grooves whose depths vary in a step-wise manner in a constant period is preferable for producing a large return efficiency when used with a single element photodetector that receives light diffracted in one of the + or - directions by the diffraction grating because the diffraction efficiency of either one of + and - order diffraction light is made larger than the other (Col. 5, lines 10-20 and Col. 6, lines 23-36).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made for the diffraction grating of Funato to have grooves whose depths vary in a step-wise manner in a constant period as suggested by Tanabe, the motivation being to produce a large return efficiency for photodetector of Shindo in view of Funato.

7. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shindo in view of Funato as applied to claim 1 above, and further in view of Ootaki et al (hereafter Ootaki) (US 5,734,637).

Shindo in view of Funato disclose the optical head device of claim 1. Shindo in view of Funato does not disclose that that the optical head device further comprises a rim-intensity correction means.

Ootaki discloses a rim-intensity correction means and teaches that an enhanced rim intensity allows for a reduced spot diameter and certain read out from a high density optical information recording medium (Col. 3, lines 48-53).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a rim intensity correction means in the optical head device of Shindo in view of Funato as suggested by Ootaki, the motivation being to allow for a reduced spot diameter and certain read out from a high density optical information recording medium.

8. Claims 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shindo in view of Funato as applied to claim 2, and further in view of Kajiyama et al (hereafter Kajiyama) (US 6,552,990).

In regard to claim 20, Shindo in view of Funato discloses the optical head device as claimed in claim 2 having a plurality of semiconductor lasers, optical elements, and a photodetector. Shindo discloses that an objective lens (Fig. 7, element 18) is provided as one of the optical elements. Shindo in view of Funato does not disclose that the objective lens is fixed to a package or that the plurality of semiconductor lasers, the optical elements, and the photodetector are disposed in the package.

Kajiyama discloses an optical head device wherein an objective lens (Figs. 51A and 51B, element 7) is fixed to a package (Figs. 51A and 51B, element 42) and that the plurality of semiconductor lasers (Figs. 51A and 51B, elements 1a and 1b), optical elements (Figs. 51A and 51B, elements 2-4 and 40-41), and a photodetector (Figs. 51A and 51B, element 8) are disposed in the package (Figs. 51A and 51B). Kajiyama teaches that by doing so, the objective optical head device is moved back and forth in the radial direction while maintaining the spatial relation of the elements (Figs. 51A and 51B and Col. 17, lines 12-20).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to dispose the plurality of semiconductor lasers, the optical elements, and the photodetector of Shindo in view of Funato into the package of Kajiyama and to fix the objective

lens to the package as suggested by Kajiyama, the motivation being to allow the elements of the optical head device to move back and forth in the radial direction while maintaining the spatial relation of the elements.

In regard to claim 21, Kajiyama discloses an optical head device further comprising a supporter (Figs. 51A and 51B, element 43), wherein the package is connected to the supporter movably with respect thereto (Figs. 51A and 51B).

Allowable Subject Matter

9. Claims 16 and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 16 and 17 contain allowable subject matter for the reasons specified in the previous Office action.

Response to Arguments

10. Applicant's arguments filed July 5, 2005, with respect to rejections over Ohyama, have been fully considered but they are not persuasive. Applicant argues that Ohyama does not disclose an optical head device wherein the plurality of semiconductor lasers are disposed so that beam spots, formed on the optical information recording medium, of light beams emitted from the plurality of semiconductor lasers are aligned in a substantially same direction as a pit-row direction or a guide groove direction, wherein the pit-row direction and the guide groove direction are both aligned along a tangential direction in the optical information recording medium because the set of beams (Fig. 14, elements B0-B2) resulting from the first light source (Fig. 14, element 25) are displaced radially from the set of beams (Fig. 14, elements B0-B2) resulting from the second light source

(Fig. 14, element 27). However, the disputed claim limitation above reads on the device of Ohyama in two ways. In the first way, the claimed "beam spots" are the beam spot formed by Fig. 14, element B1 resulting from the first light source (Fig. 14, element 25) and beam spot formed by Fig. 14, element B2 resulting from the second light source (Fig. 14, element 27). These beam spots, formed on the optical information recording medium, of light beams emitted from the plurality of semiconductor lasers, are disposed so that the beam spots are aligned in a substantially same direction as a pit-row direction or a guide groove direction, wherein the pit-row direction and the guide groove direction are both aligned along a tangential direction in the optical information recording medium. The beam spots are not aligned in exactly the same direction as a pit-row direction or a guide groove direction because the beam spots are displaced in the radial direction, but the claim limitation is still met because it only requires that the beam spots are aligned in a substantially same direction as a pit-row direction or a guide groove direction.

In the second way, the beam spots are claimed "beam spots" are the beam spot formed by Fig. 14, elements B1 and B2 resulting from the same one of the plurality of semiconductor lasers. These beam spots, formed on the optical information recording medium, are "of light beams emitted from the plurality of semiconductor lasers" because they are of two of the set of six beams (Fig. 14, elements B0-B2 from element 25 and elements B0-B2 from element 27) emitted from the plurality of semiconductor lasers. The displacement in the radial direction mentioned by Applicant does not occur between beam spots resulting from the same one of the plurality of semiconductor lasers and the beam spots are disposed so that the beam spots are aligned in a substantially same direction as a pit-row direction or a guide groove direction, wherein the pit-row direction and the guide groove direction are both aligned along a tangential direction in the optical information recording medium as shown by Fig. 14.

11. Applicant's arguments filed July 5, 2005, with respect to rejections over Shindo in view of Funato have been fully considered but they are not persuasive. Applicant argues that Shindo does not disclose beam spots from a plurality of semiconductor lasers having the claimed alignment because only one semiconductor laser of the plurality of semiconductor lasers is ever on at a given time. However, the claims do not require that beam spots formed from light beams emitted from different semiconductor lasers exist simultaneously. The alignment of the beam spots is independent of time. The beam spots from one of the plurality of semiconductor lasers are produced at certain positions on the optical recording medium. The alignment of the beam spots is relative to the positions at which the beam spots are formed. The time at which the spots are formed is irrelevant to their positions and therefore irrelevant to their alignment.

It is noted that in Applicant's claimed invention, only one semiconductor laser of the plurality of semiconductor lasers is ever on at a given time (Page 11, lines 15-21) and if the alignment in the claim limitations requires the "beam spots" to include at least a beam spot from each of the plurality of semiconductor lasers simultaneously formed on the recording medium, then the claims would not be enabled by the specification.

12. Applicant's arguments filed July 5, 2005, with respect to claims 5, 12-14, 18, 20 and 21, have been fully considered but they are not persuasive because they depend on the arguments with respect to Shindo in view of Funato which are unpersuasive as noted above.

Conclusion

13. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael V Battaglia whose telephone number is (703) 305-4534. The examiner can normally be reached on 5-4/9 Plan with 1st Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa T Nguyen can be reached on (703) 305-9687. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael Battaglia

BRIAN E. MILLER
PRIMARY EXAMINER